

## Oregon Renewable Portfolio Standard Case Study:

The Oregon Renewable Portfolio Standard (RPS) requires that all utilities and electricity service suppliers (ESSs)<sup>1</sup> serving Oregon load must include in their portfolio of power sold to retail customers a percentage of electricity generated from qualifying renewable energy sources. The percentage of qualifying electricity that must be included varies over time, with all utilities and ESSs obligated to include some renewably-generated electricity in their portfolio by the year 2025.

Table 1 below summarizes the percentage targets for those affected by the Oregon RPS. Note that there are two conditions when utilities have to meet the large utility standard regardless of their size.

**Table 1: Summary of Oregon RPS Targets and Timelines**

RPS obligations on all Oregon utilities and electricity service suppliers						
The RPS applies to	Percent of Oregon's Total Retail Electric Sales	Affected Utilities <sup>2</sup> (and ESSs)	Applicable Targets in Year <sup>3</sup> :			
			2011	2015	2020	2025
Large Utilities	Three percent or more	Portland General Electric, PacifiCorp, Eugene Water & Electric Board	5%	15%	20%	25%
Smaller Utilities	At least one and a half percent but less than three percent	Central Lincoln PUD, Idaho Power, McMinnville W& L, Clatskanie PUD, Springfield Utility Board, Umatilla Electric Cooperative	No Interim Targets			10%
Smallest Utilities	Below one and a half percent	All other utilities (31 consumer-owned utilities)				5%
Electricity Service Suppliers (ESSs)	Any sales in Oregon	Any Electricity Service Supplier (ESS)	An aggregate target for the ESS is determined by assuming each of the ESS's customers is instead being served by the utility who would otherwise be serving the customer.			
Conditional Oregon RPS Targets						
Utilities that Buy New Coal Plants or Power	Below three percent	A utility that buys into a new coal plant or signs a new contract specifically for new coal power is treated as a large utility.	5%	15%	20%	25%
Publicly Owned Utilities that Annex	Below three percent	Annexing investor-owned utility territory without consent will trigger being treated as a large utility.	5%	15%	20%	25%

<sup>1</sup> Oregon's deregulation law allows non-utility power sellers (called ESSs) to sell power to non-residential customers. Currently, this applies only to Portland General Electric and PacifiCorp service territory.

<sup>2</sup> Based on 2005 Oregon Public Utility Commission (OPUC) utility data (the latest currently available).

<sup>3</sup> Utilities that grow into the 3 percent level have a delayed timeline as if they had entered the RPS initially.

## **Exemptions and Modifications to Oregon RPS Targets**

Utilities don't have to comply with an RPS target to the extent that the requirements of the RPS:

- Lead to a utility expending more than four (4) percent of their electricity-related annual revenue requirements on the costs of complying with the RPS.<sup>4</sup>
- Unavoidably displace firm Federal Base System (FBS) preference power rights ("cheap hydro") from the Bonneville Power Administration (BPA) for a consumer-owned utility.
- Result in a utility having no other choice but to acquire power resources in excess of their load requirements in a given compliance year.
- Result in the unavoidable displacement of a non fossil-fueled power resource.
- Unavoidably displace low-price hydropower from power contracts with Mid-Columbia River dams until such a time when those contracts can't be renewed or replaced.

## **Eligible Resources and Facility Eligibility Date**

Qualifying electricity for Oregon's RPS must be derived from the sources and types of facilities listed in Table 2 below. Note that where multiple fuels are used to power a generating facility only the proportion of output that uses qualifying resources can count toward the RPS.

**Table 2: Eligible Resource Types Based on Facility Operational Date**

<b>From Generating Facilities in Operation Before January 1, 1995</b>	<b>From Generating Facilities That Became Operational On or After January 1, 1995</b>
Up to 50 average megawatts per utility, per compliance year, of hydropower owned by an Oregon utility and certified as a low-impact facility by a national certifying entity recognized by ODOE <sup>5</sup> through rulemaking.	Hydropower, if located outside of certain state, federal, or NW Power & Conservation Council protected water areas.
	Wind
	Solar Photovoltaic and Solar Thermal
	Wave, Tidal, and Ocean Thermal
	Geothermal
The increment of improvement from efficiency upgrades made to hydropower facilities, although if the improvement is to a federally-owned BPA dam only Oregon's allocated share of the dam's power output can qualify.	Biomass and biomass byproducts; including but not limited to organic waste, spent pulping liquor, woody debris or hardwoods as defined by environmental criteria, agricultural wastes, dedicated energy crops and biogas from digesters, organic matter, wastewater, or municipal solid waste (e.g., landfill gas). However, the burning of trash (municipal solid waste) or wood that is treated with chemical preservatives disqualifies that resource.
The increment of improvement from capacity or efficiency upgrades made to facilities other than hydropower facilities.	Other resources as determined to qualify through ODOE rulemaking. However, nuclear fission and fossil fuel sources are prohibited in all cases as qualifying resources.
Electricity from hydrogen derived from any of the above resources qualifies for the RPS.	

<sup>4</sup> More detail on the cost limitation provisions of the RPS is provided on page 4 of this summary.

<sup>5</sup> ODOE = Oregon Department of Energy; OPUC = Oregon Public Utility Commission

Electricity from BPA that is designated as environmentally-preferred power (or any future BPA product that serves as their renewable energy power choice) qualifies regardless of its source.

## Renewable Energy Certificates (RECs)

Compliance with the Oregon RPS requires proof of generation of the qualifying electricity. Like many states, Oregon requires proof that comes in the form of a REC.

Oregon recognizes two types of RECs in the RPS. Initially, all RECs are “bundled” together with their associated electricity that is produced at the renewable electricity generation facility. When both a REC and the electricity associated with that REC are acquired together, it is said that one has acquired a bundled REC. Bundled REC ⇔ REC + Power

The owner of a REC may decide to “unbundle” the REC and the electricity associated with that REC and sell each of the two components separately. In doing so the purchaser of the power loses the ability to claim that the power is renewable energy. The REC with no power, however, may be used by its new owner to comply with the RPS. Unbundled REC ⇔ REC with no power

There are different geographic eligibility requirements for different types of RECs in the RPS. Unbundled RECs may come from facilities throughout the entire Western Electricity Coordinating Council (WECC) region -- including British Columbia, Alberta, and a small part of Mexico -- as shown in Figure 1 to the right. In contrast, bundled RECs must come from facilities located in the United States portion of the WECC, as shown in Figure 2 below.

**Figure 1: Geographic Eligibility for Unbundled RECs**



**Figure 2: Geographic Eligibility for Bundled RECs**



The electricity associated with a bundled REC must also be delivered to the utility or ESS. However, the associated renewable electricity can be “swapped out” for non-qualifying electricity (e.g., from natural gas or coal) as it makes its way to its final destination. This allows for non-qualifying electricity to “shape” or “firm” wind power and other intermittent power resources.

Renewable electricity sold as a product from the Bonneville Power Administration does not have geographic restrictions.

## Meeting the Renewable Portfolio Standard with RECs

To meet an Oregon RPS target obligated utilities or ESSs must acquire the requisite number of RECs and then retire those RECs permanently. However, for the three largest utilities (only) no more than 20 percent of their compliance in a given year may be met through the use of unbundled RECs, although large consumer-owned utilities (namely the Eugene Water and Electric Board) have a limit of 50 percent until 2020. RECs from PURPA<sup>6</sup> facilities (normally small-scale) in Oregon are exempt from this limit. The same is true for RECs from net-metered, off-grid, or other customer-sited installations in Oregon.

<sup>6</sup> PURPA is a federal law that requires utilities to purchase the output of smaller energy projects.

Excess RECs acquired may be banked and used in future years, but older RECs must be used before newer RECs. RECs may also be acquired to “true up” compliance by buying RECs up to 3 months past the end of the year and applying them for compliance with the previous year. Banking does NOT convert all RECs to unbundled status.

For multi-state utilities such as PacifiCorp:

- A REC would be considered bundled for purposes of the Oregon RPS to the extent that the underlying generation (or cost of generation, if the percentage of cost is the jurisdictional allocator) is allocated to Oregon.
- A REC would be considered unbundled for purposes of the Oregon RPS if the underlying generation was allocated to another state jurisdiction and the REC was used to satisfy the Oregon RPS.
- A REC would be considered bundled for purposes of the Oregon RPS if the underlying generation was initially allocated to another state jurisdiction and **both** the underlying generation and associated REC were thereafter transferred to Oregon.
- A REC (bundled or unbundled) used to satisfy an RPS in another state jurisdiction cannot be used to satisfy the Oregon RPS, but the Oregon RPS does not prevent a REC used to satisfy a federal RPS from being used to satisfy the Oregon RPS.

### **Consumer Protection and Cost Controls**

There are three mechanisms that serve as cost protections for Oregon consumers, an alternative compliance payment mechanism and an overarching “cost cap” on utility RPS expenditures.

*Risk Adjusted Least Cost Standard:* Regulated utilities must submit Oregon RPS implementation plans but, in general, are subject to the same scrutiny and existing procedural steps. All prudently incurred costs associated with compliance with the RPS are recoverable in the rates of an electric company, including interconnection costs, costs associated with using physical or financial assets to integrate, firm or shape renewable energy sources on a firm annual basis to meet retail electricity needs and other costs associated with transmission and delivery of qualifying electricity to retail electricity consumers. Costs associated with compliance with the Oregon RPS are NOT an above-market cost for the purposes of ORS 757.600 to 757.687.

*Alternative Compliance Payment:* In lieu of acquiring a REC to comply with a portion of the RPS, a utility or ESS may instead pay a set amount of money per megawatt-hour (MWh) into a special fund that can be used only for acquiring renewable energy resources in the future, or for energy efficiency and conservation programs. This rate is set for each utility and ESS by the Public Utility Commission or, for consumer-owned utilities, by those utility’s governing boards. This mechanism sets an effective cap on the cost of complying with the RPS on a per MWh basis.

*Cost Cap:* Utilities are not required to comply with the RPS to the extent that the sum of the incremental costs of compliance with the RPS (as compared with fossil-fuel power), the costs of unbundled RECs, and alternative compliance payments made exceed four (4) percent of a utility’s annual revenue requirement in a compliance year. RPS compliance costs are not included in the annual revenue requirement to prevent a compounding effect. Consumer-owned utilities may also include R&D costs associated with renewable energy projects in this calculation. An equivalent cost cap for each ESS is determined by rule through the Public Utility Commission.

### **Resource Diversity**

Since an RPS does not, in and of itself, encourage a wide diversity of renewable resources to be developed the state's Public Purpose Charge (PPC) on electric bills is extended through 2025. Moreover, the renewable energy component of the PPC (~ ½ percent) is directed to fund only projects of 20 MW or less. The PPC becomes the complement to the RPS to encourage a balance of project sizes -- especially smaller, community-based renewable energy projects. The RPS also declares the Legislature's desire that, as a non-binding goal, community-based and small-scale projects of 20 MW or less comprise 8 percent of RPS compliance by 2025. In addition, to ensure long-term contract stability for small projects, the state's PURPA law<sup>7</sup> is reinstated for all utilities.

### **Green Power Programs for All Utilities**

As part of the RPS, every utility in Oregon must offer their customers the option of voluntarily purchasing renewable energy (i.e., Pacific Power or Rocky Mountain Power's *Blue Sky* program). Because customers are expecting these purchases to go above and beyond what is required of their utility by the RPS, these customer purchases don't count toward the RPS.

### **Misc Compliance Issues for Utilities**

By January 1, 2008, the OPUC must establish an automatic adjustment clause as defined in ORS 757.210 or another method that allows timely recovery of costs prudently incurred by an electric company to construct or otherwise acquire facilities that generate electricity from renewable energy sources and for associated electricity transmission.

The Oregon RPS also allows utilities to recover in the rates of all but the largest customers the costs of conservation measures.

Utilities and ESSs must submit annual compliance reports to the OPUC or, in the case of consumer-owned utilities, to their customers or members.

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<sup>7</sup> PURPA was recently repealed in several regions, creating uncertainty for those signing PURPA contracts.